

Screen Time, Pandemic and Child Neurology

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Abstract

After the COVID-19 pandemic spread and became uncontrollable then the governments worldwide enforced school closure as part of their containment strategy, which gave rise to digital technology and virtual learning for ensuring some degree of classes continuity. This article tries to explain the condition of increased screen time due to online digitalized education system amidst pandemic and it also briefs the neurological impact on child due to screen timing and pandemic.

Keywords: Screen Time, Pandemic, COVID-19, Child, Neurology

Short Communication

The global corona virus has directly affected more than 70 million people [1] and indirectly affected billions of people worldwide. This public health crisis is also having a negative impact on the social and economic aspects. However, the corona virus appears to be relatively less likely to infect children, but the psychological impact is distinctively profound. There is still uncertainty and confusion about what will happen next with the pandemic, which adults have accepted it to some extent but it does not seem easy for children to understand and accept it. For them, the change in daily routine, the compulsion to stay indoors, and the difficulties of being away from school and friends, are some of the things they are rarely able to talk about openly.

Unlike earlier times, nowadays, children around the age of 5 years and above from family with average income, have regular access to an average of five different screens at home such as main television (TV), along with portable handheld computer game devices, Smartphone with games, internet and video, a computer, or a laptop and/or tablet computer. These children routinely get engage with two or more forms of screen viewing at the same time, mostly the Smartphone and TV. In addition to this, due to pandemic and online courses being taken by the schools laptop is also in most viewing list. To overcome the spread of COVID pandemic the world has taken many preventive measures, like schools were shifted to digital virtual learning for the children. But there is possibility that a prolonged battle against the pandemic may lead to an increase in the incidence of myopia by shaping long term behavioral changes conducive for the onset and progression of myopia due to drastic addition of screen time for children in the form of digital virtual learning [2]. According to the article published in JAMA network by He

Me et. al.2015, among 6-year-old children, the addition of 40 minutes of outdoor activity at school compared with usual activities resulted in a reduced incidence rate of myopia over the next 3 years [3].

In addition, many children's daily routines have changed because of home-based/online-based learning. Children around the age of 3 years who do not go to school are more likely to be reached by parental care. However, those parents who have to go for work or have to work from home have major problems. Pre-COVID time had already digital division with parents being busy with their office assignments on laptop and child being busy on Smartphone, and similar is the post-COVID situation as online classes and work from home have further sharpened the digital division. Online classes have helped a lot for school children in filling the educational gap during the pandemic but its negative impact has been the increased screen time among the children. If this is being continued then this might lead to internet dependency as well as addiction and further leading to dependency and addiction to electronics devices like Smartphone, laptops, TV, etc.

There have been many complaints from the parents that they have to handover their mobile phones to their children for whole time of online classes. It has also been heard that most of the children who are taking online classes are found playing online games. Mostly in low and middle income countries (LMICs), where the newer generation are ahead of the older generation in technology and the internet, as there were less medium of education and less availability of computer back then, these kind of parents are not capable of monitoring what their children are doing, which has led children in avoiding the classes for online free gaming sites.

Whether you keep the TV on all the time or the whole family sits around using their Smartphone, too much of screen time can cause physical, mental and behavioral problems. Such problems include poor reading, lack of interest in social relationships, lack of interest in personal hygiene, quick temper tantrums, sleep disturbances, obesity and restlessness [4].

School-age children who watch TV or use a computer more than 2 hours per day are more likely to have behavioral problems like emotional breakdown, unsocial, and inattentiveness. Obesity is also seen due to more time being engaged in sedentary activity, such as watching TV and playing video games, is certainly being a high level risk factor for becoming overweight in children [5]. Although many parents use TV to wind down before bed, screen time before bed can backfire and can result into sleep problems. The rays of light emitting from screens interfere with the sleep cycle in the brain and can lead to insomnia [6]. In addition, exposure to violent TV shows, movies, music, and video games can cause children to become desensitized to it and can result to violent behaviors and they may use violence to solve problems and may imitate what they see on TV [7].

Children should spend less time sitting watching electronic screens, or restrained in prams and seats instead of that they should get quality sleep and have more time for actively playing if they are to grow up healthy, according to new guidelines issued by the World Health Organization (WHO) on the year 2019 [8]. Although recently many schools have reopened but the distance education in the form of online learning as the alternative education system are somewhat guaranteed for few more months in LMICs unless permanent solution for the pandemic is introduced.

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